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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,447	03/01/2004	Nobuaki Hashimoto	118890	9995
25944 7590 04/03/2007 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER AU, BAC H	
			ART UNIT	PAPER NUMBER
			2822	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/03/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/788,447

Applicant(s)

HASHIMOTO, NOBUAKI

Examiner

Bac H. Au

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 7 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 7 is/are allowed.
- 6) ☒ Claim(s) 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment dated March 2, 2007 in which claim 1 was amended, claims 4-6 were canceled, and claim 12 was added, has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo (JP-A-09-051020) in view of Furusawa (U.S. Pub. 2002/0151171) and Chen (U.S. Pub. 2002/0125557).

Regarding claim 12, Tsuneo [Figs.1-5] discloses a method of manufacturing an electronic device, the method comprising:

forming an external terminal [21] on an interconnect pattern [5] formed on a substrate [2];

subsequently mounting a chip component [3] on the substrate face up, the chip component having an electrode [10] on a first surface of the chip component [Para.30 lines 4-6] opposite a second surface facing the substrate;

forming an insulating section [19,11] adjacent to the chip component; and

forming an interconnect [12] on the insulating section from the electrode [10] to the interconnect pattern [5] for electrically connecting the electrode and the interconnect pattern at a temperature lower than a melting point of the external terminal [As disclosed (Paras.41-47 and process steps as described in Figs.2-5), whereby the external terminals 21 are formed on the substrate prior to the mounting of chip 3 and forming of interconnect 12. For this reason, it would be inherent that the process of forming the interconnect (curing of a conductive paste in this case) is done below the melting point of the external terminals in order to not cause damage to the external terminals 21.].

Tsuneo fails to disclose forming an interconnect by inkjet. However, Furusawa [Fig.9] discloses forming an interconnect [72] by inkjet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Furusawa into the method of Tsuneo use inkjet to form an interconnect.

The ordinary artisan would have been motivated to modify Tsuneo in the manner set forth above for at least the purpose of providing a printing method that is high speed and eliminates waste [Furusawa; Para.69 lines 25-28].

Tsuneo fails to disclose a chip component having a side surface that is inclined so as to descend in an outward direction from the first surface. However, Chen [Figs.3-4] discloses a chip component [204] having a side surface that is inclined [210] so as to descend in an outward direction from the first surface. It would have been obvious to

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one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chen into the method of Tsuneo provide a chip component having a side surface that is inclined so as to descend in an outward direction from the first surface.

The ordinary artisan would have been motivated to modify Tsuneo in the manner set forth above for at least the purpose of preventing pollution of the active surface of the chip by adhesive material adhering to the surface [Chen; Paras.7,16].

Allowable Subject Matter

Claims 1-3 and 7 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Amendments to the claims were persuasive.

Conclusion

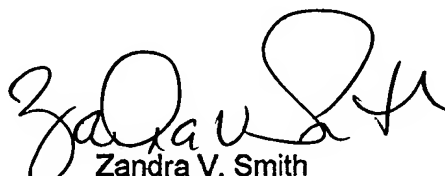
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bac H. Au whose telephone number is 571-272-8795. The examiner can normally be reached on Mon-Fri 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BHA


Zandra V. Smith
Supervisory Patent Examiner
27 March 2007